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G. TURNER MOLLER, JR. 711 NORTH CARANCAHUA, SUITE 720 CORPUS CHRISTI, TX 78475			EXAMINER DONG, DALEI	
			ART UNIT 2879	PAPER NUMBER

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/728,671	MORRIS, THOMAS M.	
	Examiner	Art Unit	
	Dalei Dong	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18, 20, 25, 26 and 30-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18, 20, 25, 26 and 30-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Amendment filed September 22, 2005, has been entered and acknowledged by the Examiner.

Claim Objections

2. Claim 25 is objected to because of the following informalities:

Regarding to claim 25, the "solder and wire-bonded" should be changed to "solder or wire bonded". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5, 7, 12-14, 16-18, 21-26, 30-34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,857,767 to Hochstein in view of U.S. Patent No. 6,670,751 to Song.

Regarding to claim 1, Hochstein discloses in Figures 1-4, a light emitting assembly (10), comprising: a metal substrate (12) providing an electrically insulating coating (16) less than one thousand microns thickness (see column 4, lines 21-32); a

plurality of circuit traces (18) on the electrically insulating coating (16) providing terminals and conductive paths for placing light emitting elements (20) in the circuit, the terminal (18) being of a metal compatible with metal droplet connections (26); a plurality of light emitting elements (20) having leads (22) bonded to the terminals (18) with metal droplets (26).

However, Hochstein does not disclose a thermal conductor, having therein a metal, fixed relative to the substrate, spaced from and electrically isolated from the circuit traces, the entire flat section of the base of at least some of the light emitting elements being in conductive heat transmitting relation with the thermal conductor.

Song teaches in Figure 4D, a light emitting assembly comprising: a thermal thermal conductor (18d), having therein a metal, fixed relative to the substrate, spaced from and electrically isolated from the circuit traces, the entire flat section of the base of at least some of the light emitting elements being in conductive heat transmitting relation with the thermal conductor to make the light emitting elements release heat at a greater efficiency (see column 5, line 66 to column 6, line 4). Song also teaches in Figures 4 and 7, where metal paste or lump (18a-18e) fills the bottom hole of the light emitting device (23) for the purpose of achieving superior heat sink properties compared to the light emitting elements which have holes for heat sink only.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the thermal conductor of Song for the void space below the light emitting elements of Hochstein in order to achieve superior heat sink properties compared to the light emitting elements which have holes for heat sink only.

Regarding to claim 2, Hochstein discloses in Figures 1-4, the metal substrate (12) is selected from the group consisting essentially of aluminum, aluminum alloys, magnesium, and magnesium alloys (see column 4, lines 15-20) and the electrically insulating coating is an anodized layer (see column 4, lines 56-58).

Regarding to claim 3, Hochstein discloses in Figure 1-4, the electrically insulating coating is a cured thick film coating (see column 4, lines 53-56).

Regarding to claim 5, Applicant claims the electrically insulating coating is a plasma applied coating, please note that the claimed method steps are product by process limitations. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of product. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Furthermore, it is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an obvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Regarding to claim 7, Song teaches in Figures 4 and 7, the light emitting element (13) includes a metallic lower surface (secondary ceramic sheet made of alumina 12) and the metallic lower surface abuts the metal coating (18a-18e) and the reason to combine is the same as above.

Regarding to claim 12, Hochstein discloses in Figures 1-4, the circuit traces (18) are thin film traces (see column 6, lines 5-25).

Regarding to claim 13, Hochstein discloses in Figures 1-4, the circuit traces (18) are thick film traces.

Regarding to claim 14, Hochstein discloses in Figures 1-4, the substrate (12) comprises an area of undulating surface increasing the heat transmission capacity of the substrate.

Regarding to claim 16, Hochstein discloses in Figures 1-4, the metal droplet (26) is a wire-bonded connection (electrical conductive adhesive 26 bonded the electrical leads 22 to the circuit traces, and thus the Examiner interprets metal droplet 26 is a wire-bonded connection).

Regarding to claim 17, Hochstein discloses in Figures 1-4, a resistor in thermal contact with the substrate (12) in circuit with the light-emitting element (20) (see column 7, lines 21-24).

Regarding to claim 18, Hochstein discloses in Figures 1-4, a light emitting assembly (10), comprising: a metal substrate (12) providing an electrically insulating coating (16) less than one thousand microns thickness (see column 4, lines 21-32); a plurality of circuit traces (18) on the electrically insulating coating (16) providing terminals and conductive paths for placing light emitting elements (20) in the circuit, the terminal (18) being of a composition compatible with metal droplet connections (26); a plurality of light emitting elements (20) having leads (22) bonded to the terminals (18) with metal droplets (26).

However, Hochstein does not disclose a shiny metal coating on the substrate, electrically isolated from the circuit traces, positioned to reflect light away from the metal substrate there by increasing the reflectivity of the substrate and increasing the amount of light emitting from the assembly; and a clear finish covering at least part of the metal coating and reducing tarnishing thereof.

Song teaches in Figures 4D and 7, a light emitting device, comprising: a shiny metal coating or lump (18D) on the substrate, electrically isolated from the circuit traces, positioned to reflect light away from the metal substrate and increasing the amount of light emitting from the assembly; and a clear finishing covering at least part of the metal coating (18D) and reducing tarnishing thereof for the purpose of achieve superior heat

sink properties compared to the light emitting elements which have holes for heat sink only.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the shiny metal coating of Song for the void space below the light emitting elements of Hochstein in order to achieve superior heat sink properties compared to the light emitting elements which have holes for heat sink only.

Regarding to claim 25, Hochstein discloses in Figures 1-4, a light emitting assembly (10), comprising: a metal substrate (12) having a surface providing an electrically insulating coating (16) less than one thousand microns thickness; a plurality of circuit traces (18) on the electrically insulating coating (16) providing terminals (18) and conductive paths (18) between the terminals for placing light emitting elements (20) in circuit, the circuit traces (18) comprising a quantity of silver effective to make the paths conductive, to make the terminals compatible with wire bonded (26) connections and to reflect a significant amount of light away from the substrate; and at least one light emitting element (20) having leads (22) bonded to the terminals (18) wire-bonded connections (26) and having a flat thermally conductive base.

However, Hochstein does not disclose having a flat thermally conductive base, electrically isolated from the circuit traces, juxtaposed to and entirely in conductive heat transmitting relation with the substrate.

Song teaches in Figure 3C and 4D, a light emitting assembly comprising: a flat thermally conductive base, electrically isolated from the circuit traces (shown in Figure

3C, by ceramic sheet 22), juxtaposed to and entirely in conductive heat transmitting relation with the substrate (shown in Figure 4D, with metal slug 18D) for the purpose of achieving superior heat sink properties compared to the light emitting elements which have holes for heat sink only.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the ceramic sheet and the thermal conductor of Song for the void space below the light emitting elements of Hochstein in order to achieve superior heat sink properties compared to the light emitting elements which have holes for heat sink only.

Regarding to claim 26, Hochstein discloses in Figures 1-4, a light emitting assembly (10) comprising: a metal substrate (12) having a surface providing an electrically insulating coating (16) less than one thousand microns thickness; a plurality of circuit traces (18) on the coating providing terminals and conductive paths between the terminals for placing light emitting elements (20) in circuit; a plurality of light emitting element (20) having leads (22) bonded to the terminals (18).

However, Hochstein does not disclose a shiny metal coating on the substrate, electrically isolated from the circuit traces, positioned to reflect light away from the metal substrate there by increasing the reflectivity of the substrate and increasing the amount of light emitting from the assembly; and a clear finish covering at least part of the metal coating and reducing tarnishing thereof.

Song teaches in Figures 4D and 7, a light emitting device, comprising: a shiny metallic area comprising a silver rich coating (see column 6, lines 30-39) on the substrate, electrically isolated from the circuit traces, positioned to reflect light away from the metal substrate and increasing the amount of light emitting from the assembly; and a clear finishing covering at least part of the metal coating (18D) and reducing tarnishing thereof for the purpose of achieve superior heat sink properties compared to the light emitting elements which have holes for heat sink only.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the shiny metal coating of Song for the void space below the light emitting elements of Hochstein in order to achieve superior heat sink properties compared to the light emitting elements which have holes for heat sink only.

Regarding to claim 30, Hochstein discloses in Figures 1-4, a light emitting assembly (10), comprising: a metal substrate (12) providing an electrically insulating coating (16) less than one thousand microns thickness; a plurality of circuit traces (18) on the electrically insulating coating (16) providing terminals (18) and conductive paths (18) for placing light emitting elements (20) in circuit, the terminals being of a composition compatible with metal droplet connections; and a plurality of light emitting elements (20) having leads bonded to the terminals with metal droplets.

However, Hochstein does not disclose having a light emitting elements having thermally conductive base, electrically isolated from the circuit traces, providing a flat

section of predetermined area, the flat section being in conductive heat transmitting relation with the substrate.

Song teaches in Figure 3C and 4D, a light emitting assembly comprising: a flat thermally conductive base, electrically isolated from the circuit traces (shown in Figure 3C, by ceramic sheet 22), juxtaposed to and entirely in conductive heat transmitting relation with the substrate (shown in Figure 4D, with metal slug 18D) for the purpose of achieving superior heat sink properties compared to the light emitting elements which have holes for heat sink only.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the ceramic sheet and the thermal conductor of Song for the void space below the light emitting elements of Hochstein in order to achieve superior heat sink properties compared to the light emitting elements which have holes for heat sink only.

Regarding to claim 31, Song teaches in Figures 3C and 4D, a thermal conductor (18D) fixed to the substrate, the entire flat section being in conductive heat transmitting relation with the thermal conductor (18D), the thermal conductor being in conductive heat transmitting relation between the base of the light emitting element (13) and the substrate, and the combination to combine is the same as above.

Regarding to claim 32, Song teaches in Figures 3C and 4D, the entire flat section of the light emitting element (13) is in conductive heat transmitting relation with the electrically insulating coating, and the motivation to combine is the same as above.

Regarding to claim 33, Song teaches in Figures 3C and 4D, the insulating coating (22) has a hole immediately under the entire flat section of the light emitting element (13) is in conductive heat transmitting relation to the substrate through the hole, and the motivation to combine is the same as above.

Regarding to claim 34, Hochstein discloses in Figures 1-4, the circuit traces (18) comprise silver and glass (see column 5, lines 1-6).

Regarding to claim 36, Hochstein discloses in Figures 1-4, the metal droplet (26) is a wire-bonded connection (electrical conductive adhesive 26 bonded the electrical leads 22 to the circuit traces, and thus the Examiner interprets metal droplet 26 is a wire-bonded connection).

5. Claims 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,857,767 to Hochstein in view of U.S. Patent No. 6,670,751 to Song and in further view of U.S. Patent No. 3,598,985 to Harnden Jr.

Regarding to claim 4, Hochstein discloses in Figures 1-4, a light emitting assembly (10), comprising: a metal substrate (12) providing an electrically insulating coating (16) less than one thousand microns thickness (see column 4, lines 21-32); a plurality of circuit traces (18) on the electrically insulating coating (16) providing terminals and conductive paths for placing light emitting elements (20) in the circuit, the terminal (18) being of a metal compatible with metal droplet connections (26); a plurality of light emitting elements (20) having leads (22) bonded to the terminals (18) with metal droplets (26).

However, Hochstein does not disclose a metal coating on the substrate in heat transmitting relation between at least some of the light emitting elements and the substrate transmitting heat from the light emitting elements to the metal substrate and electrically insulating coating is a porcelain enamel. Song teaches adding metal coating to the holes or void space (24) of Hochstein to make the light emitting elements release heat at a greater efficiency (see column 5, line 66 to column 6, line 4). Song also teaches in Figures 4 and 7, where metal paste or lump (18a-18e) fills the bottom hole of the light emitting device (23) for the purpose of achieve superior heat sink properties compared to the light emitting elements which have holes for heat sink only.

Harnden Jr. teaches a metal substrate (23) is coated with the insulating material (24) comprises of porcelain enamel or glass, or some other suitable vitreous material (see column 3, lines 25-29) for the purpose of provide an efficient insulate and isolate path between different electrical components.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the electrically insulating coating of Harnden Jr. and the metal coating or paste of Song for the void space below the light emitting elements of Hochstein in order to achieve superior heat sink properties compared to the light emitting elements which have holes for heat sink only and provide an efficient insulate and isolate path between different electrical components.

6. Claims 6, 8-11, 15, 20 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,857,767 to Hochstein in view of U.S. Patent No. 6,670,751 to Song and in further view of U.S. Patent No. 5,098,864 to Mahulikar.

Regarding to claim 6, Hochstein discloses in Figures 1-4, a light emitting assembly (10), comprising: a metal substrate (12) providing an electrically insulating coating (16) less than one thousand microns thickness (see column 4, lines 21-32); a plurality of circuit traces (18) on the electrically insulating coating (16) providing terminals and conductive paths for placing light emitting elements (20) in the circuit, the terminal (18) being of a metal compatible with metal droplet connections (26); a plurality of light emitting elements (20) having leads (22) bonded to the terminals (18) with metal droplets (26).

However, Hochstein does not disclose a thermal conductor on the substrate in heat transmitting relation between at least some of the light emitting elements and the substrate transmitting heat from the light emitting elements to the metal substrate and the metal coating provides a shiny metal patch reflecting light from the light emitting

element away from the substrate thereby increasing the reflectivity of the assembly and increasing the amount of light emitting from the assembly.

Song teaches a light emitting assembly comprising: adding metal coating to the holes or void space (24) of Hochstein to make the light emitting elements release heat at a greater efficiency (see column 5, line 66 to column 6, line 4). Song also teaches in Figures 4 and 7, where metal paste or lump (18a-18e) fills the bottom hole of the light emitting device (23) for the purpose of achieve superior heat sink properties compared to the light emitting elements which have holes for heat sink only.

Mahulikar teaches in Figure 2, a metal coating (46) provides a shiny metal (silver) patch reflecting light from the light-emitting element (32) away from the substrate (12) for the purpose of increasing the reflectivity of the assembly and increasing the amount of light emitting from the assembly.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize shiny metal patch of Mahulikar for the electrically insulating coating of Song for the void space below the light emitting elements of Hochstein in order to achieve superior heat sink properties compared to the light emitting elements which have holes for heat sink only and increasing the reflectivity of the assembly and increasing the amount of light emitting from the assembly.

Regarding to claim 8, Hochstein in view of Song discloses, the thermal conductor (18D) is a coating on the substrate and the circuit traces (18) is made of silver or gold or an alloy thereof (see column 5, lines 1-6) and Mahulikar teaches in Figure 2, metal

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coating (46) comprises of silver and thus the circuit traces and the metal coating are the same material (silver) and the reason to combine is the same as above.

Regarding to claim 9, Hochstein discloses in Figures 1-4, circuit traces (18) is made of silver or gold or an alloy thereof (see column 5, lines 1-6) and Mahulikar teaches in Figure 2, thermal conductor (46) comprises of silver and thus the circuit traces and the metal coating are the same material (silver) and the reason to combine is the same as above.

Regarding to claim 10, Mahulikar teaches in Figure 2, a clear finish over the metal coating thereby reducing tarnishing of the silver and the reason to combine is the same as above.

Regarding to claim 11, Hochstein discloses in Figures 1-4, circuit traces (18) is made of a mixture of epoxy (glass) and silver or gold or an alloy thereof (see column 5, lines 1-6) and Mahulikar teaches in Figure 2, thermal conductor (46) comprises of silver and epoxy (glass), and the reason to combine is the same as above.

Regarding to claim 15, Mahulikar teaches that it is old and well known in the art to utilize a solder connection for connecting electrical components. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

have utilize the solder connection of Mahulikar for the light assembly in order to securely and reliably connect the electrical components.

Regarding to claim 20, Hochstein discloses in Figures 1-4, circuit traces (18) is made of silver or gold or an alloy thereof (see column 5, lines 1-6) and Mahulikar teaches in Figure 2, metal coating (46) comprises of silver and thus the circuit traces and the metal coating are the same silver based material and the reason to combine is the same as above.

Regarding to claim 35, Mahulikar teaches that it is old and well known in the art to utilize a solder connection for connecting electrical components. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the solder connection of Mahulikar for the light assembly in order to securely and reliably connect the electrical components.

Response to Arguments

7. Applicant's arguments filed September 22, 2005 have been fully considered but they are not persuasive.

In response to Applicant's argument regarding to claim 1. The Examiner asserts that Song reference teaches in Figure 4D, the thermal conductor is not touching the ceramic substrate 11. Therefore, when the thermal conductor is utilized in the void space 24 of the Hochstein reference, the thermal conductor would be electrically isolated from

the circuit traces 18. Thus, the Examiner asserts that the prior art of record teaches the claimed invention and maintains the rejection.

Also, in response to Applicant's argument regarding to claim 5, please note that the claimed method steps are product by process limitations. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of product. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Furthermore, it is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an obvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Further, in response to Applicant's argument regarding to claim 12. The Hochstein reference teaches the thickness of the conductive traces 18 on the ranges of 1-3 mils and which is well within the range of specified by the Applicant in the Specification. The Applicant states the thin film is a known in the art to refer to processes and products where the layers are on the order of 200 to 20,000 Angstroms. Thus, the Examiner asserts that the thickness of the conductive trace 18 is within the range of 200 to 20,000 Angstroms and therefore, the conductive traces is a thin film device.

Finally, in response to Applicant's argument regarding to claim 15 and 16. The Examiner asserts that the electrical conductive adhesive 26 bonded the electrical leads 22 to the circuit traces, and thus the Examiner interprets metal droplet 26 is a wire-bonded connection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (571)272-2370. The examiner can normally be reached on 8 A.M. to 5 P.M..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571)272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



D.D.

November 21, 2005



Joseph Williams
Primary Examiner
Art Unit 2879